



S/N 09/434,654

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Kevin J. Ryan

Examiner: James Peikari

Serial No.: 09/434,654

Group Art Unit: 2186

Filed: November 5, 1999

Docket: 303.306US4

Title: PIPELINED PACKET-ORIENTED MEMORY SYSTEM HAVING A  
UNIDIRECTIONAL COMMAND AND ADDRESS BUS AND A  
BIDIRECTIONAL DATA BUS

Technical Center 2100

**AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111**

Commissioner for Patents  
Washington, D.C. 20231

Applicant has reviewed the Office Action mailed on September 27, 2001. Please amend  
the above-identified patent application as follows:

01/24/2002 SFELEKE1 00000004 190743 09434654

01 FC:102  
02 FC:103

84.00 CH  
90.00 CH

**IN THE CLAIMS**

Please substitute the claim set in the appendix entitled Clean Version of Pending Claims  
for the previously pending claim set. The substitute claim set is intended to reflect amendment  
of previously pending claims 13, 14, 32-37, 40-45, and 48-53, and addition of new claims 56-60.  
The specific amendments to individual claims are detailed in the following marked up set of  
claims.

- Sub  
Set
13. (Amended) A memory system comprising:
- a memory controller;
  - a unidirectional command and address bus coupled to the memory controller, the memory controller communicating commands and addresses to the command and address bus;
  - a bidirectional data bus coupled to the memory controller, the memory controller communicating data information to the bidirectional data bus for a write operation and receiving the data information from the bidirectional data bus during a read operation;
  - a memory module, wherein the memory module includes:
    - a plurality M of memory devices, wherein each memory device contains a data in and a data out buffer, a column decoder and a row decoder;
    - a [buffer] first register connected between the command and address bus and the plurality of memory devices, the [buffer] first register receiving and latching the